THE TOOLS OF RADIO

CHAPTER X

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Radio is not a medium of huge technical complexity. Radio is a comparatively uncomplicated medium and the working team involved in an average radio production is not as large as that called for in creating the visual image for television.

The working team involved in an average radio production falls into easily understood divisions. In the studio are one or more performers who may include actors, sound effects men, musicians, announcers, speakers. In the control room there is an engineer who coordinates their work technically. Supervising all of them, is the director.

This comparative simplicity should not mislead as to the potential of the medium. Simple does not mean easy. Neither does it mean small in potential effect.

What happens in the studio is simple, but that is not the program in its final form. The final program takes place in the mind of the listener.

THEATER OF THE MIND

The listener's mind plays an active part in every radio program. He enjoys or is impressed by what he hears in proportion to the mental activity it arouses in him. His enjoyment is measured by the imagining, thinking and feeling a radio program makes him do.

To the listener's mind, you broadcast certain words with, perhaps, sounds and music. They mean nothing unless he shapes them into pictures, events, ideas. These are the program.

Morton Wishengrad, prominent radio writer and producer, once opened an "Eternal Light" program with the sound of wind, then some words, music, and footsteps. The footsteps were made in the studio by manipulating a box of cornstarch in rhythm, giving somewhat the effect of footsteps in snow. But, because the words were right, and the music was right, the picture produced in the listener's mind was something of far greater meaning.

Here is the script opening:

SOUND: **OF WIND**

NARRATOR: In the beginning there was this sound of the wind. Nothing but this sound and the running of the primeval seas and the rustling of leaves in the primeval forests. It was the early morning of the American continent.

MUSIC: **ESTABLISH NARRATIVE THEME AND DOWN**

NARRATOR: In this early morning there was a thin western arm of land which bound Siberia to Alaska where now there are the shallows of the Bering Sea. There was also an eastern arm of land which bridged the North Atlantic. . . . . pushing up from France, through Britain, north to Iceland and Greenland, and across to Canada. And perhaps in the unfolding of the world, primitive man walked dry-shod from Siberia in the west and dry-shod from France in the east to what is now the continent of America.

MUSIC: **OUT**

SOUND: **OF FOOTSTEPS CRUNCHING THROUGH SNOW**

NARRATOR: Do you hear this sound. . . . . this is the first man on American soil . . . . . an Indian.

Compare what was happening in the studio to what was happening in the theater of the mind.

In the studio: One actor at a microphone, a group of musicians playing to another microphone and, at a third, a sound effects man playing a wind record and kneading a box of cornstarch.

In the listener's mind: A primeval world, shaped by the listener himself, out of things read, seen, heard and imagined. The radio program was whatever the words and sounds and music were able to awaken in him.

The radio director, performer, and engineer must always consider, not what they are sending into the ether, but what the listener is likely to make out of it. Radio depends strongly on the imagination of the listener, and, therefore, requires great imagination from performer and director.

Radio is a medium with a unique responsibility, because of its wide potential audience and the power over men's minds. It is a medium which has absorbed features of almost all forms of human communications and has developed from these, forms of its own, all of which give it extraordinary flexibility, whether for purposes of entertainment, information or persuasion.

THE RADIO MICROPHONE

At the center of a broadcast is the microphone. A broadcast may use one or more microphones. It will be found, in general, that fewer microphones will increase the chances of a "clean" pickup. But, on a complex program — with orchestra, cast and sound effects, a number of microphones may be required, and used successfully.

There are several types of microphones, and this may confuse the uninitiated. It is not necessary for the radio performer to have at his command a thorough knowledge of the technical workings of microphones. He should understand, however, how the various types vary in a few essential respects.

1. The Beam

A microphone should be compared to a searchlight casting a beam. This idea is so convenient that it has become embedded in radio terminology. Even engineers talk about the microphone beam, though it may not be a technically correct term.

If an actor or singer is standing outside the clearest pickup area of the microphone, he may be told by the director that he is **off beam,** or, sometimes, **off mike.**

2. Types of Microphones

Microphones vary in the number and shape of their beams.

Some have just one beam and are said to be uni-directional (one-directional).

Some have two beams, and are said to be bi-directional (two-directional).

Still others cast a beam in all directions, more like an ordinary electric light bulb than a searchlight. These are called omni-directional (non-directional).

There are also microphones which are adjustable and can, with a turn of the screw driver, be given any of the above characteristics.

These are the most important variations for the performer to understand. It is not absolutely essential for him to know whether a microphone is a velocity, a dynamic, or a cardioid. If a studio has strange-looking microphones, he should ask the engineer whether they are one-directional, two-directional or non-directional.

a. The Uni-Directional Microphone: The value of this microphone can best be explained by examples. When a singer, singing with an orchestra, uses a one-directional microphone, its insensitive or "dead" side can be turned toward the orchestra, so that the orchestra will not drown out the singer. Similarly, when a speaker is addressing a crowd, use of a one-directional microphone can help keep the coughing and rustling of the crowd relatively less prominent, since they will be in the dead area of the microphone.

Uni-directional microphones are occasionally used for dramas but are less practical for this purpose. If two or more actors are working together at a one-directional microphone, it means discomfort. Most present day uni-directional microphones can be swiveled and pointed upright. It then becomes an omni-directional microphone.

b. The Bi-Directional Microphone: This type of microphone is usually preferred for drama or interview.

When two or more performers work together at a two-directional microphone, they not only feel less crowded but have the advantage of playing to each other. This gives a feeling of natural, human interrelationship.

Another reason for preferring the two-directional microphone for drama is because the actor will often be called upon to "fade" — give the illusion of leaving the scene of action — by moving from the beam into the "dead" area. It is, therefore, convenient to have this area near at hand, as in the two-directional microphone.

c. The Omni-Directional Microphone: This is the microphone which enables the radio performer to talk from any direction. The non-directional microphone is particularly valuable for round-table discussions, or groupings of voices which will not be called upon by the director to fade from the scene.

3. **Further Microphone Classifications**

Microphones are also classified according to the physical use for which they are designed:

a. Standing Microphones: For acting casts, singers, announcers and, sometimes, for speakers.

b. Hanging Microphones: Convenient for orchestras and for picking up audience applause.

c. Desk Microphones: Chiefly for speakers and commentators.

d. Gooseneck Microphones: Useful for such special problems as the singing pianist.

e. Boom Microphones: For choral groups, orchestras; sometimes used for picking up crowd voices from a large acting cast.

f. Portable Microphones: For broadcasts outside the studio.

g. Lavaliere Microphones: Suspended closely around performer's neck. Excellent for a performer moving around from place to place.

POSITION AT THE MICROPHONE

The position of any person, sound effect, or musical instrument at the microphone is determined by various factors, including the characteristics of the sound, the characteristics of the microphone, and the characteristics of the studio. Generally, the most important consideration is: How loud is the voice or sound?

A very loud voice or sound must usually be placed further from the microphone than a soft voice or sound.

This principle, however, can only be carried out within limits. There often are other considerations, such as: Should the sound or voice seem to be near or far away? The various sounds heard must have a sensible relationship to each other.

And there are further complications. If a soft voice or sound is brought very near, it may be distorted. The type of microphone most used for radio drama (two-directional, velocity microphone) overemphasizes the low tones of any sound produced within a few inches of it. This makes voices sound unnatural, chesty, and must usually be avoided.

But, oddly enough, this distortion may sometimes be valuable, and is, in fact, indispensable to the sound effects man.

Low tones, in the listener's imagination, suggests size. When a sound is made very close to the microphone, it will be thought to come from an object larger than is actually the case. Thus, the crushing of a berry box very close to the microphone will serve for the splintering of a door, when it is smashed in by the police, or even for the collapse of a burning barn.

The sound effects man constantly uses the microphone's possibilities of distortion to play on the listener's imagination, and, when the source of a sound is actually in contact with the microphone, the distortion is even more dramatic. Such distortion should be avoided because of the danger of injuring equipment, but it can occasionally be utilized for unusual effects. Poe's "Tell-Tale Heart," for example, has been produced by holding a microphone against a person's chest.

For normal radio pickups, where no distortion is wanted, it will be seen how important it is to stay a proper distance from the microphone, and not to touch it. Unfortunately, the public has firmly in mind the image of the average singer passionately clutching the microphone as he sings. With the type of microphone used in most public address systems (crystal microphone), as in night clubs, there is no harm in clutching or caressing the microphone. But the more sensitive microphones used for most broadcasting purposes amplify contact sounds into disturbing noises. Kicking the microphone can sound like an old country fire gong.

ACTION AT THE MICROPHONE

Once the performer has his correct microphone position, the physical setup should be thought of as follows: The performer may be a foot or a few feet from the microphone; the listener is probably a few feet from his loud speaker. These combined distances may be considered the distance between performer and listener. The miles or hundreds of miles, or thousands of miles between microphone and loudspeaker are really without meaning.

This emphasizes that radio is intimate, that there are no second balcony customers to be played to, that all seats are front row orchestra seats. There is no need, in other words, to throw or project the voice to the rear of a hall.

Whenever a speaker or actor at the microphone is addressing the listener, this is the main fact to be kept in mind. It means that some habits of theater or lecture hall must be set aside. The radio artist must adjust himself to a new, intimate performer-listener relationship. And this may take imagination, because all he may see in front of him is a microphone, resembling a large cheese grater.

There is a further reason why projection should be avoided. It is likely to involve excessive and erratic volumes, which are a serious problem to radio. This problem arises not so much from the nature of the microphone as from the control room equipment.

THE CONTROL BOARD

The engineer, sitting in the control room, has in front of him the control board, or control panel. This may seem complex at first glance, but its main principles are readily understood.

Near the bottom, convenient to the engineer's hands, is a series of knobs. Each knob can control the volume of a microphone. If on a program three microphones are being used, three of the knobs will be in use.

1. **Faders**

Each knob is called a fader, because by turning it the engineer can fade whatever is coming over the respective microphones. In fact, he can fade it down or up because, oddly enough, the word "fade" has come to be used for either a decrease or an increase in volume. A sound can be faded in, up, down, or out.

Generally, the faders that are in use are connected to microphones in the immediate studio, but, occasionally, a program involves a remote pickup, such as a talk from another city or a man-in-the-street interview from a local corner. Then one of the faders can be connected with the incoming material and can control its volume.

Occasionally, for special purposes, a fader may be connected with a microphone in another studio. Generally, in a radio station, other faders are connected with record playing equipment in the control room and can control the volume of the recordings.

2. **Master Fader**

In addition to the individual faders — one for each microphone in action — there is generally a master fader. This increases or decreases the overall volume of all the microphones.

3. **Volume Indicator**

Above the faders, squarely in front of the engineer, is a small gadget in which a needle jumps back and forth, across a dial. This is the volume indicator, and it shows the over-all volume of whatever speech, sound and music are being sent out. Some understanding of this gadget is important to everyone associated with a radio production.

The needle of the volume indicator, or "V.I.," as it is familiarly referred to, jumps hectically back and forth, measuring the always varying program volume. Even between the syllables of a word it sags back toward its starting place before jumping again for the new syllable. Every sound note or syllable gives the needle its own jolt. The engineer watches it constantly.

IMPORTANCE AND PRACTICAL APPLICATION

The volume indicator is probably the most important single piece of equipment in a radio station. It is equally important to director and engineer.

The primary function of the engineer is to control the jumps of the needle — that is, see to it that the jumps go high enough, but not too high.

If the jumps of the needle do not go high enough, the listener at home will not be able to hear the words at a comfortable volume.

If the needle goes too high, station equipment may be damaged. In earlier days, a station tube would blow out, and the station might be temporarily off the air. Today, there are devices which automatically reduce dangerous volume, but a distortion of sound sometimes results. A momentary jump over the permissible volume may do no harm, but the needle must not stay more than a brief instant above the warning line. Within the permissible volume range, the engineer tries to keep the jumps of the needle as high as possible, for maximum audibility.

If a speaker is beginning to raise his voice, making excessively high peaks, the engineer must turn the fader of his microphone down slightly. If the speaker talks too softly, the engineer edges up the volume.

Note that the engineer's job of controlling the program volume adds up to this: Everything that is to be heard clearly must be sent out within a certain volume range. Whether the actor or announcer is shouting or whispering, the needle should kick within the proper range. The sounds will then be of fairly equal loudness on the home radio. This does not mean that shouts and whispers will sound alike. They will vary in quality. But they will go into the air with a somewhat similar transmission volume. The listener must not feel the need of tuning his radio up or down during a broadcast.

How does this affect a performer's work? Why does he need to be interested in the volume indicator?

Let us suppose that during a rehearsal of the famous Macbeth speech — "Life is but a walking shadow . . . . . it is a tale told by an idiot, full of sound and fury, signifying nothing —" the actor, at first, leans heavily, with great increase in volume, on the words "sound" and "fury." The needle, as a result, gives great lunges, or peaks, on these words, and the peaks jump too far into the danger zone:

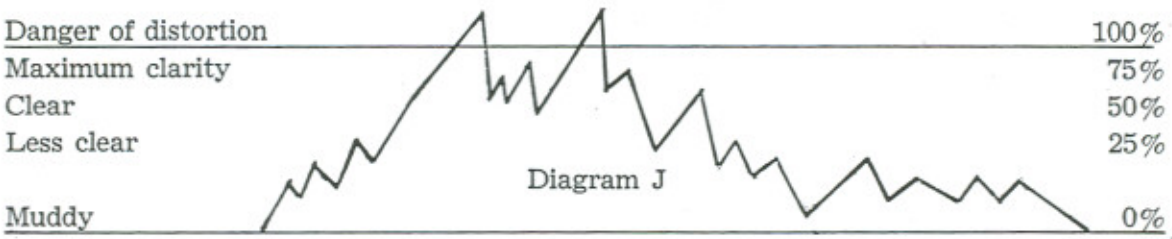

Diagram J

Full of sound and fu-ry, sig-ni-fy-ing no-thing

The engineer, nervous about the peaks, lowers the general volume of the actor's microphone on the next reading, in order to accommodate the peaks. The result is:

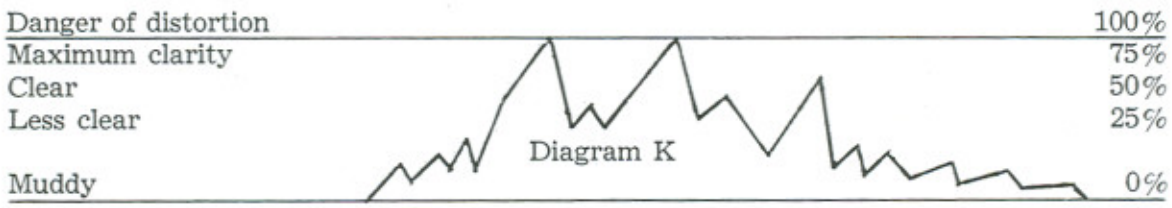

Diagram K

Full of sound and fu-ry, sig-ni-fy-ing no-thing

Notice that to keep the peaks within bounds, the engineer has really brought most of the actor's words to too low a volume. Compared to the rest of the play, much of what the chief performer is saying will now sound submerged to the listener. The word "nothing," for example, is far down in the "mud."

The director explains this problem to the actor, and at a subsequent rehearsal the actor uses less increase in volume to create his emphasis on the words "sound" and "fury." Thus the engineer can increase the actor's general volume, so that the needle jumps as follows:

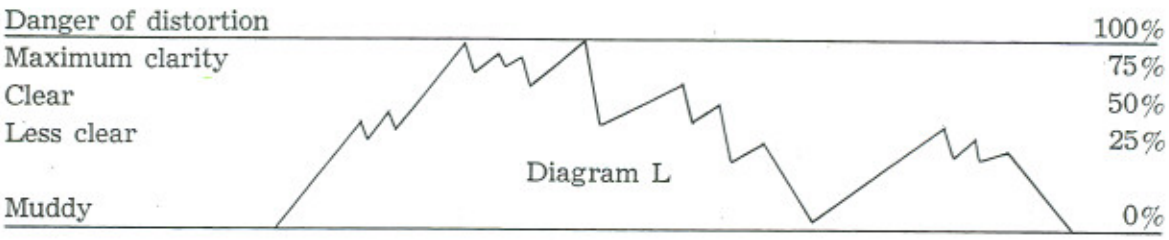

Diagram L

Full of sound and fu-ry, sig-ni-fy-ing no-thing

The peaks are now no longer disproportionately high, but the actor's average volume is higher. In the following rehearsals he may feel he is giving less, talking less loudly. But, paradoxically, the audience will be able to hear him more easily and clearly for that reason.

The lesson to be learned is simply this: The engineer can give the most favorable volume treatment, the most volume prominence, to an actor or speaker who keeps his peaks under control. An actor or orator whose volume is erratic, whose peaks are troublesome, must be kept at a low, submerged volume.

It is especially important that singers understand this matter of peaks, for songs often require rather sudden increases in volume. Such increases must sometimes be compensated for by a slight change in position, or in the direction of the singing. Also, the engineer must be ready in advance for each peak and know about how high it will be, so that he can adjust his knob in time for any further necessary compensation. All this requires precise coordination between engineer and performer.

It should be apparent in this brief analysis that an understanding of the volume indicator will show the performer — whether actor, announcer, singer, sound effects man, or musician — the danger of erratic changes of volume. It should also show that such changes, when essential, must be planned in coordination with the engineer.

BALANCE OF VARIOUS ELEMENTS

The control equipment enables the engineer not only to control over-all volume, but also to adjust the relative levels (volumes) of various program elements, if performed at separate microphones.

If an orchestra is picked up at one microphone, a singer at another, the engineer can alter their relative prominence. Similarly in drama, if dialog is performed at one microphone and a crowd background at another, he can vary the relationship between them by adjusting the faders.

This mixing of the different elements is the second principal function of the control equipment. Because of its importance, the term "mixing panel" is sometimes applied to the control panel.

It must be remembered that the engineer's control over relative volume is not complete, only partial. It sometimes happens that, in trying to turn down a sound effects background which is obliterating dialog, the engineer turns the sound effects microphone out entirely — and the background is still too heavy. It is picking up too loudly even on the microphone used by the actors. This occasional problem and the special equipment that can solve it will be outlined in the section on the function of screens and the isolation booth.

Most problems of relative volume require no equipment, other than the engineer's control panel. This assumes that the engineer must, of course, be helped by those in the studio, where microphone positions and performance volumes must always take the matter of relative levels into account. The engineer can usually make any further adjustments needed.

He is guided in these adjustments entirely by ear. There is, in the control room, no visual indication of the volume being sent out over each individual microphone. The engineer therefore relies, in making his adjustments, on what he and the director hear over the control room loud speaker. Occasionally, especially in a remote broadcast, they may listen on earphones. The control room loudspeaker and earphones, therefore, play a crucial role in the production process.

LOUD SPEAKER AND EARPHONES

The control room loud-speaker is an important guide to both engineer and director. During a broadcast it plays what is going on the air. During rehearsal, what is heard over the loud-speaker, is the basis for corrections in relative levels and for the director's suggestions to the performers.

It is important that the loud-speaker be of highest excellence. If it is unbalanced in quality, overemphasizing high or low tones, the director may make serious mistakes. During an orchestra rehearsal a faulty loud-speaker, with inadequate base tones, may cause the director to ask the orchestra conductor to move his base instruments closer to the microphone. This move may improve the effect on the control room loud-speaker but result in a disasterously bassy broadcast.

On the other hand, the high quality of good control room loud-speaker can also be a trap. It will enable the director and engineer to hear many subtleties and overtones, and they may wrongly assume that these are equally audible to the home listener. The wise engineer and director will occasionally turn the control room loud-speaker down to a decidedly low volume, to see how the balance of elements will sound under less favorable listening conditions. The control room loud-speaker can be turned up or down in volume without affecting the volume of what is being broadcast.

At remote pickups there may be no control room available, and the engineer's control equipment may, therefore, be in the same room or hall as the performers. The engineer will then wear earphones to check the program balance, and the director may do likewise.

During a studio program, an orchestra leader or sound effects man will occasionally wear earphones, connected with the control room, to hear what is being broadcast. This is not so much a check on balance as to hear cues. Sometimes, so much noise is being made by music or sound effects that the conductor or sound effects man cannot hear words spoken at the dialog microphone, and, therefore, cannot be ready for the following cue. Earphones will solve the problem.

Occasionally, a director will prefer to work in the studio, giving direction and signals from there instead of from the control room. If so, he will wear earphones to get the total effect.

Directors usually work chiefly from the control room and base their directions to the performers on what they hear over the all-important control room loud-speaker.

During rehearsal they convey most of their suggestions to the performers in the studio via another tool of radio — the talk-back.

TALK-BACK

The talk-back, or talk-back system, consists of a microphone in the control room connected with a loud-speaker in the studio. The loud-speaker is generally directly over the control room window.

In order to speak to the performers the director merely presses a button located, sometimes, on the control panel. This button turns on the talk-back.

It also automatically shuts off all studio microphones. The system is usually so arranged that communication can only be in one direction at a time. Performers need to understand this. While the director is making suggestions from the control room, over the talk-back, it is useless to interrupt with questions and protestations; the director cannot hear. He will hear no word from the performers until he once more releases the talk-back button. When he does so, the performer will hear a click on the studio loud-speaker; this tells them they can once more communicate with him.

The talk-back microphone and loudspeaker need not be of broadcast quality, but must be clear. It is also important that the talk-back loud-speaker in the studio be set at a proper volume. If the volume is too low, the director will not be heard when he interrupts a scene to make comments.

SCREENS AND ISOLATION BOOTH

A radio production will often include speech, sound effects and music. In addition, these several elements will be broadcast at the same time. In such instances it will be important that proper relative levels are maintained.

A certain set of elements, properly balanced, may, in the listener's mind, become a beautiful picture. The same set of elements, badly balanced, may be chaos and an invitation to the listener to tune out.

It will be discovered that proper balance can usually be maintained by: (1) Adjusting positions in the studio; (2) tempering the loudness of speech, sound effects, or music in the studio; (3) Adjustment of volume controls by the engineer. But sometimes these methods are not enough.

In Orson Welles' production of Sherwood Anderson's story "I Was a Fool," one heard a boy-girl conversation in the grandstand at a race track. The talk had a note of intimacy, but the background was bedlam: Hawkers selling food, brass band playing, the crowd in an uproar. In such a scene, it is useless to ask an actor playing a hawker to sell his wares softly, or the brass band to play at an undisturbing volume. The whole quality of the scene would be lost if the background were performed sotte voce. The ear-splitting spirit is needed.

How can one control the relative levels of the intimate boy-girl dialog and this crowd background? Is it not inevitable that the bedlam will be picked up so loudly on the dialog microphone that it will drown out the talk?

The first device used toward solving such problems was the sound-absorbing screen, for some reason called a "gobo." Gobos began to be used in the earliest days of radio. A performer or group of performers who had to be shielded from a heavy background or orchestra accompaniment could be surrounded, along with their microphone, by several gobos.

An important additional solution was developed later, in which the arrangement of screens gradually grew into a portable booth on wheels, called an "isolation booth." Today, a large network center usually has several such booths, each three or four times the size of a telephone booth — large enough for two or three actors and a microphone. The booth has windows, so that those inside can see cues from the director. Such a booth can be wheeled into any studio where it is needed for a special effect.

The isolation booth, therefore, becomes a studio within a studio. Here is a way to isolate the boy and girl in the grandstand from the earsplitting band and the hawkers. The engineer can have complete control over the relative levels.

At many stations, closets or small storage rooms adjoining a studio are used in the same way.

Another solution is to use two regular studios — one for dialog, another for the noisy background — both connected with the control room.

ECHO CHAMBER

The echo chamber is a valuable tool for producing arresting effects and providing unusual acoustical changes.

This chamber may or may not be in or near the studio itself; it may be on a different floor of the radio station.

The echo chamber may be a small room like a labyrinth:

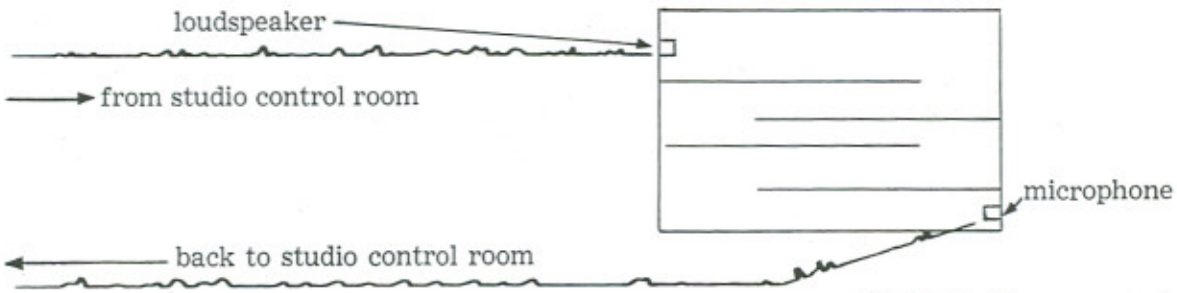

Diagram M

Most present day echo chambers are constructed so that no two wall surfaces are parallel and one end is considerably larger than the other.

In the studio, the passage that is to have an echo effect is being picked up on a normal microphone, in a normal way. Actors involved in such a passage do not hear anything different. But the engineer sends the speech, sounds or music by wire to the echo chamber. There, they are played from a loudspeaker at one end of the labyrinth. After traveling, perhaps a hundred feet — depending on the desired time lag — they are picked up by a microphone near the end of the labyrinth, and then returned by wire to the studio. There, the speech, sounds or music, having been on what is mainly a time-consuming trip, are combined with the original pickup and the combination is broadcast.

In other words, everything is heard twice: Each syllable as originally spoken, plus the same syllable after a short journey. The lag between the two is so short that the double effect is not heard, as from a distant canyon wall, but it closely resembles the effect heard in a cave, in which each sound comes bouncing back almost the moment it is spoken, so that the sound is heard from everywhere at the same time.

The effect produced by the echo chamber is actually cleaner than the effect in a cave. In a cave, echoes come from many surfaces at many different distances, each of which keeps bouncing back every sound, so that a chaotic effect is the result. The echo chamber gives a single, controlled time lag, easily accepted by the ear as the sort of thing heard in a cave, tunnel, or large hold, but more listenable.

The echo chamber is finding increasing popularity and use in music pickup. Slight echo in modern orchestrations and choral arrangements for radio is finding widespread acceptance because the resulting reverberation effect gives the listener the illusion and depth of a stage in a theatre.

FILTER

The filter is a device used to give the effect of something heard over a telephone, radio, or other communication system. It may also be used for an inner voice, a ghost, an invisible man or other supernatural effects.

It is generally a boxed instrument, smaller than a portable radio. It is usually placed in the control room, sometimes in the studio. In most modern studios, filters are built into the control room equipment.

The filter, when in use, is connected with one of the microphones, so that everything spoken over that microphone passes through the filter before it is broadcast. The filter is a kind of tone sieve which strains out parts of the voice. The degree to which tones are removed or filtered out can be controlled. High frequencies or low frequencies, or both, can be filtered, making a variety of effects.

SUMMARY

The Armed Forces Radio broadcaster should know that a radio program consists of speech, sounds, and music, broadcast either live or recorded. In addition to this basic and essential knowledge, he should be concerned with the over-all volume of these elements and also their relative volumes. He may broadcast these elements with the purest possible room quality; he may purposefully preserve a reverberant quality, or induce it by artificial means; he may even deliberately distort voices, sounds and tones.

The Armed Forces Radio broadcaster should always remember that many of the items of equipment that accomplish these effects were developed for just one reason: They stimulate the listener's mind into creative activity.

Radio does not send out a filtered voice because such a voice sounds like a ghost. It uses such a voice because it knows that, given a strange distortion and the right kind of suggestion from the words and, perhaps, from the music, the listener can quickly be stimulated into imagining a ghost.

The tools of radio are but instruments by which the Armed Forces Radio broadcaster can invade the mind of a listener and enlist his partnership in creating, through thought, imagination and feeling, the experience of a radio broadcast. One inadvertent slip or indiscretion during air time will destroy this empathy between listener and broadcaster.

The Armed Forces broadcaster, radio or television, must constantly guard against on-the-air activities which will distort his public image. Horseplay, meaningless conversation, insulting remarks in the guise of humor, deliberate camera movements to catch performers off guard — these have no place in the posture of an Armed Forces Radio or Television Station.

The tools of radio and television are expensive and delicate command support instruments. Properly used, they will reflect credit on the military broadcaster, the local command, and the Service which authorized their installation. Improperly used, these selfsame tools can jeopardize the career of an Armed Forces Radio or Television Station. Remember — they are more than tools — they are a trust.